AMSAT News Service Weekly Bulletins
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Posted: Sun, Jul 16, 1989 2:00 PM GMT Msg: BGIJ-3995-5318
From: DCOWDIN
To: IS
CC: W1AW
Subj: $ANS-196

SB ALL @ AMSAT $ANS-196.01
BALLOON LAUNCH PLANNED

HR AMSAT NEWS SERVICE BULLETIN 196.01 FROM AMSAT HQ
SILVER SPRING, MD JULY 15, 1989
TO ALL RADIO AMATEURS BT

Planned Balloon Launch To Commemorate The 20th Anniversary Of The Moon Walk

To help commemorate the 20th anniversary of man's first moon walk, two radio amateurs will be launching a balloon that will have as part of its telemetry beacon a "digitized" voice reproduction of President Kennedy's address to Congress authorizing the manned space program. Also, listeners will hear a "digitized" reproduction of former Astronaut Neil Armstrong's famous words as he made the first step upon the moon's surface. This balloon launch is the idea of radio amateurs Carl Lyster (WA4ADG) and David Fields (N4HBO) who live in the Knoxville/Oakridge, TN area. The launch of this balloon, which coincidently will occur at the end of SPACEWEEK 1989, is planned to happen on Saturday, July 22nd between the hours of 7:00 A.M. to 8:00 A.M. EDT. The two pound balloon package will consist of three lithium battery-powered transmitters: 1) an FM transmitter with an RF output of 3 watts on a frequency of 144.34 MHz, 2) an HF transmitter with about a quarter of a watt output on 28.866 MHz, and 3) an aircraft Emergency Locator Transmitter (ELT) which can be heard on a frequency of 121.60 MHz. The first beacon at 144.34 MHz will contain, in addition to the "digitized" voice transmissions, a telemetry "stream" which will consist of the station identification, temperature, and power supply information as the payload makes its ascent to 100,000 feet dangling from a 12 foot diameter weather balloon. The telemetry data will be sent via packet radio at 1200 baud. Telemetry will also be sent in a ASCII format at 300 baud with the following characteristics: 7 data bits, 2 stop bits, no parity, and modem tones of 1200/2200 Hz with the start bit at 2200 MHz. The HF beacon at 28.866 MHz will likewise provide identification and telemetry data on CW at 7 WPM but no "digitized" voice transmissions. All telemetry transmissions will occur at 2 minute intervals. The third transmitter, the ELT, will be used in conjunction with the Civil Air Patrol (CAP) to help locate the package after the balloon carrying it aloft bursts at approximately 100,000 feet; a parachute will bring the payload safely back to earth. Finding the transmitters after their decent to earth will provide a valuable training exercise for the CAP personnel located in that area. Based on previous data, it is expected the balloon will be aloft for about three hours and stations as far away as 500 miles should be able to hear the 2M FM beacon. All stations who are planning to monitor these transmissions next Saturday are asked to make note of the altitude and azimuth bearings along with the times, and to please monitor both the 2 meter and 10 meter signals to observe fading and other propagation characteristics. Listeners are urged to tape record the signals and to make the recordings available to N4HBO and WA4ADG for post-flight analysis. There will be a "pre-launch" net on Saturday, July 22nd one hour BEFORE lift-off on 7.155 MHz. If some reason that the balloon launch cannot occur on Saturday morning, the "back-up" launch time will be at the same time on Sunday, July 23rd with the "pre-launch" net again occuring one hour before lift-off. If you would like further details about this event, please contact Carl at (615) 588-7120 or Dave at (615)

482-5155.

[NOTE: In a late breaking ANS item, Bill Brown (WB8ELK) will also be launching a ballon from Wapakoneta, OH from the Neil Armstrong Air & Space Museum later at around 12:00 P.M. EDT that day. His balloon package will have a fast scan or ATV transmissions at 439.250 MHz with telemtry superimposed on the picture. Those wishing to receive these pictures should also listen to the "pre-launch" net at 7.155 Mhz around 11:00 A.M. EDT.]

/EX
SB ALL @ AMSAT $ANS-196.02
ZRO TEST UPDATE FROM WA5ZIB

HR AMSAT NEWS SERVICE BULLETIN 196.02 FROM AMSAT HQ
SILVER SPRING, MD JULY 15, 1989
TO ALL RADIO AMATEURS BT

ZRO Memorial Achievement Award Program On AO-13 Proves To Be Poplular

Andy McAllister (WA5ZIB), AMSAT-NA Vice President of User Operations and "test" conductor for the ZRO Memorial Technical Achievement Award Program (or ZRO Test for short), reports that the first two sessions of the the ZRO Test on AO-13 July 1st and July 8th went very well. For those unaware of this activity, the ZRO Test allows AO-13 users to gauge their stations receiving efficiency and their operating skill. The usual practice during the ZRO Tests is to send random CW five-digit code groups at progressively lower signal strengths through AO-13 with the emphasis on copying correctly as many code groups as possible. Initially, the signals which are sent at level "zero" correspond to the signal strength of the telemetry beacon; thereafter, signals become progressively more difficult to copy. During the most recent ZRO Test, several stations copied down to level "eight" which is 24 dB below the signal strength of the beacon. One participant, W7KIV, submitted the first "perfect" score at level "nine" from the July 1st session; runners-up at that level included WB6LLO and W7ID who copied four of the the five digits correctly. At level "nine," WA5ZIB had an output power of 86 milli-watts!

If you wish to participate in the upcoming ZRO sessions, please take note of the following times:

Sunday July 16, 1989 at 07:20 UTC
Saturday July 22, 1989 at 20:50 UTC
Saturday July 29, 1989 at 04:20 UTC
Saturday August 12, 1989 at 20:20 UTC

All transmissions from the control station use CW at 10 words-per-minute. Please avoid transmitting near the 145.840 MHz downlink frequency during ZRO Tests. The above dates and times have been carefully chosen for best coverage and squint angles. Any changes will be announced as soon as possible. ZRO brochures are still available from WA5ZIB for an S.A.S.E. with one unit of postage. If you wish to inquire about receiving your ZRO Test brochure or certificate, write to: Andy McAllister, WA5ZIB, 14714 Knightsway Dr., Houston, TX 77083. Good luck!

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SB ALL @ AMSAT $ANS-196.03
FO-12 EXTENDED OPERATING SCHED

HR AMSAT NEWS SERVICE BULLETIN 196.03 FROM AMSAT HQ
SILVER SPRING, MD JULY 15, 1989
TO ALL RADIO AMATEURS BT

FO-12 Operating Schedule Presented For The Next Several Months

Through the efforts of Sumio Nakane (JH3BJN), AMSAT-NA has received the

following operating schedule for FUJI-OSCAR-12 for the next several months:

DATE	MODE	OPERATING PERIOD
07/15/89	JD	15:08 UTC until 19:25 UTC
07/19/89	JD	09:39 UTC until 17:51 UTC
07/22/89	JD	15:08 UTC until 08:04 UTC on 07/23/89
07/29/89	JD	06:43 UTC until 14:55 UTC
PLEASE NOTE: NO FO-12 OPERATION FROM AUG. 1ST TO AUG. 15TH DUE TO SOLAR ECLIPSES		
08/16/89	JA	02:40 UTC until 10:52 UTC
08/19/89	JA	02:00 UTC until 10:12 UTC
08/25/89	JD	00:39 UTC until 08:51 UTC
08/27/89	JD	00:53 UTC until 09:04 UTC
09/02/89	JA	22:37 UTC until 06:49 UTC on 09/03/89
09/05/89	JA	21:57 UTC until 06:00 UTC on 09/06/89
09/08/89	JD	19:15 UTC until 03:27 UTC on 09/09/89
09/13/89	JA	18:48 UTC until 03:00 UTC on 09/14/89
PLEASE NOTE: NO FO-12 OPERATION FROM SEPT. 15TH TO SEPT. 25TH DUE TO SOLAR ECLIPSES		
09/26/89	JA	15:12 UTC until 23:24 UTC
09/30/89	JD	21:50 UTC until 12:44 UTC on 10/01/89
10/06/89	JD	20:29 UTC until 11:23 UTC on 10/07/89
10/10/89	JA	10:42 UTC until 18:54 UTC

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SB ALL @ AMSAT $ANS-196.04
AO-13 TELEMETRY PROCESSING S/W

HR AMSAT NEWS SERVICE BULLETIN 196.04 FROM AMSAT HQ
SILVER SPRING, MD JULY 15, 1989
TO ALL RADIO AMATEURS BT

Project OSCAR Offers A AO-13 Telemetry Processing Utility Program

Individuals interested in AO-13 telemetry can process data files created by P3C.EXE using the "P3C Utility Program." The utility is written for PC compatibles. The program is supplied in compiled form on two 360K diskettes. While the program P3C.EXE processes AO-13 telemetry in real time, this utility program adds to your capability to "post-process" files created by P3C.EXE. Some of the unique capabilities of this new WB6GFJ program and what you might wish to use it for are briefly given as follows:

1. Text messages (K, L, M and N blocks) may be pulled out of P3C.EXE and sent to the screen, printer, or to an ASCII disk file. This allows for easy re-transmission of important PSK messages to your local BBS, newsletter or PBBS.

2. Y-Blocks can be retrieved from P3C.EXE files and redirected to the screen, printer, or ASCII files. With minimal editing, the Y-Blocks are readable by the "W6SHP RTTY Telemetry Program." Individuals with a G3RUH PSK modem can supply Y-Block data files to friends only interested in RTTY data.

3. You have the ability to inspect 98% of the bytes within the SYSPAGE or Intermediate Event SYSPAGE of AO-13 telemetry. Selected bytes can be sent to the printer, screen, or ASCII files. This allows you to create ASCII files of a single byte of data and process the data to meet your own interests. Once the data is in ASCII format, it is a fairly straight forward project to create your own "code" to process the data. Also, with the data in ASCII format, it is no problem to transport the information into a spreadsheet program to

create a plot a particular parameter versus time. When you select bytes from within a block, you may select from one to 128 bytes at one time.

This Utility is menu driven so that no additional programming is required to access P3C.EXE data files. However, since there is no tutorial regarding AO-13 telemetry, you should have some background in the field of AO-13 telemetry so you know what you are looking for. Program documentation is provided on the disk and can be viewed from within the program using one of the utilities. Documentation can also be directed to your printer with the DOS "print" command. A copy of the AO-13 Block Description written by Command Station DB2OS is also provided on the disk.

If you don't have a G3RUH modem, but know a friend who does, the Utility series can read any file created by P3C.EXE. Therefore, if you are interested in telemetry, have your friend supply you with data files. (Note: at this point in time, Project OSCAR does not supply additional disks of data files. If enough interest is shown, that option MAY be made at a future date.)

To find out how to acquire a copy of the Utility program, send a S.A.S.E to Project OSCAR at the following address:

Project OSCAR
P. O. Box 1136
Los Altos, CA
94023-1136

Please Note: Minimum Equipment Required to run this Utility program is a PC Compatible, 360K Floppy Disk, EGA Monitor

/EX
SB ALL @ AMSAT $ANS-196.05
AMSAT SHORT BURSTS

HR AMSAT NEWS SERVICE BULLETIN 196.05 FROM AMSAT HQ
SILVER SPRING, MD JULY 15, 1989
TO ALL RADIO AMATEURS BT

AMSAT Short Bursts

There is a AMSAT 17M Net which is convened every Sunday evening beginning at 23:00 UTC on a frequency of 18.155 MHz. Acting as Net Control Stations (NCS) are KO5I and N4QQ. This net provides another opportunity for those who cannot listen to the AMSAT nets on Sunday afternoon to still find out what is happening in the world of amateur radio satellites. So join KO5I and N4QQ on Sunday evenings for this new AMSAT HF net.

At the present time, the launch of the MICROSATs is scheduled for November 9, 1989. Since this falls within two days of the "normally" scheduled AMSAT-NA Space Symposium, AMSAT-NA officials have decided to change the date of this annual AMSAT event to the weekend of November 3rd, 4th, and 5th. If you would like to obtain more information about the AMSAT-NA Space Symposium, please contact AMSAT-NA HQ's at (301) 589-6062 or Ralph Wallio (W0RPK) at (515) 961-6406.

Courtney Duncan (N5BF), Manager of the AMSAT Operations Net, has issued the following schedule for the next several weeks for the times and frequencies of the OPS Net. These nets on AO-13 are designed to discuss the many happenings in the world of Amateur Radio Satellites. If you have any comments or suggestions to pass along to N5BF, you can leave them to COURTNEY DUNCAN on the AMSAT-NA BBS at (314) 447-3003.

AMSAT OPERATIONS NET SCHEDULE 1989

Day Date Time Orbit Frequency Local evening, U.S.

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Wed  19 Jul  0230    840     435.970     Tuesday
Sun  30 Jul  0130    863     435.970     Saturday
Thu  10 Aug  0100    886     435.970     Wednesday

de DB2OS  01May89:   ***  AO-10 TRANSPONDER SCHEDULE ***
                          14Jul89 to 01Sep89

                   Mode-B  : from  MA 000 to MA 225

                       O S C A R - 1 3

Date      : 14Jun89 until 16Aug89 ! 16Aug89 until 16Nov89
BLON/BLAT :          178.6/-0.8   !           210/0
Mode-B    :     MA 000 to MA 110  !     MA 003 to MA 160
Mode-JL   :     MA 110 to MA 145  !     MA 160 to MA 200
Mode-B    :     MA 145 to MA 255  !     MA 200 to MA 240
OFF       :             %         !     MA 240 to MA 003
Mode-S    :     MA 150 to MA 160  !     MA 210 to MA 222

Transponders will be in operation during the whole orbit from June 14 until
August 16 due to excellent sun angles and power budgets.  However, no perigee
operations will occur between August and November due to perigee solar
eclipses!  The 70cm and 2M omni-directional antennas will be used from MA 230
until MA 30.

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